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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: : HARRY MICHAEL SIEGEL, ET AL.
Serial No. : 10/066,245
Filed : January 31, 2002
For : METHOD FOR USING A PRE-FORMED FILM IN A
TRANSFER MOLDING PROCESS FOR AN INTEGRATED
CIRCUIT (AS AMENDED)
Group No. : 1732
Examiner : Edmund H. Lee

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

The undersigned hereby certifies that the following documents:

1. Response to Notice of Non-Compliant Appeal Brief;
2. Third Substitute Appeal Brief; and
3. Postcard Receipt

relating to the above application, were deposited as "First Class Mail", with the United States Postal Service, addressed to: MAIL STOP APPEAL BRIEF - PATENTS, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 17, 2007.

Date: 9/17/07

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DOCKET NO. 01-C-084 (STMI01-01084)
Customer No. 30425

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P.O. Box 1450
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RESPONSE TO NOTICE OF NON-COMPLIANT APPEAL BRIEF

In response to the Notice of Non-Compliant Appeal Brief dated September 6, 2007, the Applicant is submitting this Third Substitute Appeal Brief.

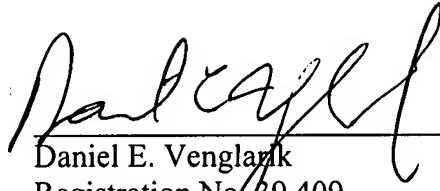
If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *dvenglarik@munckbutrus.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS, P.C.

Date: 1-17-2007

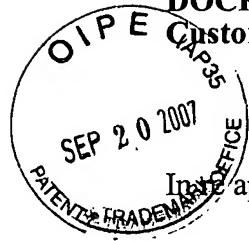


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DOCKET NO. 01-C-084 (STMI01-01084)
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THIRD SUBSTITUTE APPEAL BRIEF

In response to the Notice of Non-Compliant Appeal Brief dated September 6, 2007, the

Applicants respectfully submit this Third Substitute Appeal Brief.

REAL PARTY IN INTEREST

The real party in interest for this appeal is the assignee of the application,
STMICROELECTRONICS, INC.

RELATED APPEALS AND INTERFERENCES

There are no known appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 1-2, 4-5, 7-13, 15-16, and 30-37 are pending in the present application. Claims 3, 6, 14, and 17-29 have been canceled. Claims 1-2, 4-5, 7-13, 15-16, and 30-37 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,226,997 to *Vallier* in view of either of U.S. Patent No. 5,846,477 to *Hotta et al* or U.S. Patent No. 6,652,799 to *Seng et al*. The rejection of claims 1-2, 4-5, 7-13, 15-16, and 30-37 is appealed.

STATUS OF AMENDMENTS

An Advisory Action mailed February 7, 2006 indicated that the amendments to the claims submitted after the final Office Action will be entered for the purposes of appeal.

122, 160, 162, 164 and 166 through the transfer mold 100. Specification, page 20, lines 16-21. The transfer mold 100 with the pre-formed compliant film 600 is placed over an integrated circuit die 180 and substrate 190, with the pre-formed compliant film 600 covering surfaces of the integrated circuit die 180 and substrate 190. Specification, page 20, line 22 through page 21, line 2. Part of the pre-formed film 600 may contact a surface of the integrated circuit die 180 (or a portion thereof) to prevent molding compound from covering that surface and allowing that surface to remain exposed following encapsulation. Specification, Figure 3, page 14, lines 10-12, page 15, lines 10-12 and page 20, line 24 through page 21, line 2. Molding compound such as a liquefied, thermosetting plastic resin is then injected (through channels not depicted in Figure 6) through the transfer mold 100 and the pre-formed film 600 to encapsulate at least portions of the integrated circuit die 180 and substrate 190. Specification, Figure 4, page 14, line 17 through page 15, line 2, page 21, lines 2-5. Once the molding compound solidifies, the transfer mold 100 is removed from over the integrated circuit die 180 and substrate 190, leaving surfaces on integrated circuit die 180 that were contacted by pre-formed film 600 exposed but with other portions of the integrated circuit die 180 and substrate 190 encapsulated by the solidified molding compound. Specification, Figure 5, page 15, lines 3-10, page 21, lines 5-7.

Support for Independent Claims:

Per 37 C.F.R. § 41.37, only support for the independent claims is discussed herein. The discussion of the claims in this section is for illustrative purposes and is not intended to affect the scope of the claims.

The embodiment of independent claim 1 relates to a method 900 used in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound. Specification, page 20, lines 8-11. The method includes:

providing a film of compliant material (step 910, Specification, Figure 9, page 20, lines 13-14);

pre-forming the film 600 of compliant material to at least approximately conform a shape of the film to a mold cavity surface of the transfer mold (step 920, Specification, Figures 6 and 9, page 20, lines 14-16);

placing the pre-formed film 600 of compliant material within the transfer mold adjacent to the mold cavity surface of the transfer mold (step 930, Specification, Figures 6 and 9, page 20, lines 16-18); and

vacuum holding the pre-formed film 600 of compliant material against the mold cavity surface of the transfer mold (Specification, page 20, lines 18-21).

The embodiment of independent claim 7 relates to a method 900 used in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound. Specification, page 20, lines 8-11. The method includes:

providing a tape 700 made of a film 600 of compliant material (step 910, Specification, Figure 9, page 20, lines 13-14);

pre-forming a plurality of portions 710, 720 of the tape to at least approximately conform a shape of each of the plurality of portions of the tape to a mold cavity surface of the

transfer mold (step 920, Specification, Figures 6 and 9, page 18, lines 4-5, page 20, lines 14-16); and

placing one of the plurality of pre-formed portions of the tape within the transfer mold adjacent to the mold cavity surface of the transfer mold (step 930, Specification, Figures 6 and 9, page 18, lines 5-20, page 20, lines 16-18).

The embodiment of independent claim 12 relates to a method 900 used in a transfer molding process of a type that uses a top half 810 of a transfer mold 800 and a bottom half 820 of the transfer mold to encapsulate portions of an integrated circuit 180 within a molding compound. Specification, page 20, lines 8-11. The method includes:

providing a first film 600, 830 of compliant material (step 910, Specification, Figures 8-9, page 20, lines 13-14);

pre-forming the first film 600, 830 of compliant material to at least approximately conform to a shape of the first film to a mold cavity surface of the top half 810 of the transfer mold (step 920, Specification, Figures 6 and 8-9, page 19, lines 13-15, page 20, lines 14-16);

placing the pre-formed first film of compliant material within the top half of the transfer mold adjacent to the mold cavity surface of the top half of the transfer mold (step 930, Specification, Figures 6 and 8-9, page 19, lines 13-15, page 20, lines 16-18);

providing a second film 600, 840 of compliant material (step 910, Specification, Figures 8-9, page 20, lines 13-14);

pre-forming the second film of compliant material to at least approximately conform a shape of the second film to a mold cavity surface of the bottom half of the transfer mold (step 920, Specification, Figures 6 and 8-9, page 19, lines 13-15, page 20, lines 14-16);
placing the pre-formed second film of compliant material within the bottom half of the transfer mold adjacent to the mold cavity surface of the bottom half of the transfer mold (step 930, Specification, Figures 6 and 8-9, page 19, lines 15-17, page 20, lines 16-18);
and
vacuum holding at least one of the pre-formed films of compliant material against at least one of the mold cavity surfaces of the transfer mold (Specification, page 20, lines 18-21).

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-2, 4-5, 7-13, 15-16, and 30-37 were rejected under 35 U.S.C. § 103(a) as obvious over *Vallier* in view of either of *Hotta et al* or *Seng et al*.

ARGUMENT

I. The rejection of claims 1-2, 4-5, 7-13, 15-16, and 30-37 were rejected under 35 U.S.C. § 103(a) as obvious over Vallier in view of either of Hotta et al or Seng et al.

In *ex parte* examination of patent applications (and reexamination of patents), the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142, page 2100-125 (8th ed. rev. 5 August 2006). Absent such a *prima facie* case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.*

To establish a *prima facie* case of obviousness, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Id.* The reasonable expectation (or predictability) of success must be found in the prior art, and not based on applicant's disclosure.

A. Claims 1, 4-5, 12, 15-16 and 37

Independent claim 1 recites vacuum-holding a pre-formed film of compliant material against the mold cavity surface of the transfer mold. Similarly, independent claim 12 recites vacuum holding at least one of the pre-formed films of compliant material against at least one of the mold cavity surfaces of the transfer mold's top and bottom halves. Such a feature is not found in the cited

The final Office Action acknowledges that *Vallier* fails to disclose vacuum holding a pre-formed film of compliant material against a mold cavity surface of a transfer mold. Paper

No. 20051110, page 3. The Examiner asserts that *Hotta* or *Seng* discloses these elements of Claim 1 and that it would be obvious to modify *Vallier* with either of these references. Paper No. 20051110, pages 3-4.

The final Office Action states that it would be obvious to modify *Vallier* with either *Hotta* or *Seng* because of the various benefits provided by the “vacuum holding means” disclosed in *Hotta* or *Seng*. For example, the Examiner asserts that the “vacuum holding means” of *Hotta* or *Seng* would allow the liners 12, 14 of *Vallier* to be held “on the mold surface as shown in both added references.” Paper No. 20051110, page 4. However, the Examiner fails to establish that this benefit is needed or even desired in the system of *Vallier*.

Vallier discloses a preform assembly including upper and lower liners 12, 14 for use within a resin transfer molding apparatus. *Vallier*, Abstract, column 3, lines 23-25. A dry fabric preform 10 is placed between the upper and lower liners 12, 14 to form the preform assembly, which is then placed between upper and lower mold halves 20, 25. *Vallier*, column 3, lines 37-42 and 46-52. The upper and lower liners 12, 14 are “formed by conventional methods to the shape of a first mold half and a second mold half, respectively,” with one possible “conventional method” involving heating each liner and placing them on a forming mold that represents a prototype of a mold half and dimensionally simulates that mold half. *Vallier*, column 3, lines 25-27, column 4, lines 23-31. The entire preform assembly (the upper liner 12, the fabric preform 10, and the lower liner 14) in *Vallier* is simply laid onto the lower mold half 25, with positioning aligned based on the ports 22’ that are part of or attached to the liners 12, 14 and gravity maintaining the preform assembly in place as the

upper mold half 20 is closed and the space between the liners 12 and 14 is evacuated. *Vallier*, column 4, lines 38-45, column 5, lines 14-20.

Absolutely nothing indicates that the preform assembly of *Vallier* needs to be held by a vacuum against the upper mold half 20 or against the lower mold half 25. Unlike the subject matter of the present invention, in which the pre-formed compliant film must be retained in the mold cavity of the transfer mold while the transfer mold is lowered, cavity facing down, over the integrated circuit die and substrate, no issues of retaining the perform assembly of *Vallier* against the forces of gravity are apparent. The final Office Action never shows that the preform assembly of *Vallier* requires or would benefit from the use of vacuum holding means. A completely fictional need cannot properly motivate the combination of teachings from different references.

Not only that, the modification proposed by the final Office Action would now require two different vacuum mechanisms to be provided in *Vallier*. The first vacuum mechanism would be needed to hold the preform assembly against one or both of the mold halves 20, 25 (which could not be accomplished by evacuation through the ports provided), while the second vacuum mechanism would be needed, as described in *Vallier*, to evacuate air from between the liners 12, 14. See *Vallier*, column 5, lines 14-20. This modification would therefore increase the cost and complexity of the molding apparatus of *Vallier*, without providing any apparent benefit as noted above.

Beyond that, *Hotta* and *Seng* use vacuum forces to (i) shape a film and (ii) hold the film in place. Regarding the first use, the liners 12, 14 of *Vallier* are pre-formed into particular shapes, so the vacuum forces used in *Hotta* and *Seng* are not needed in *Vallier* to shape the liners 12, 14.

Regarding the second use, as noted above, the entire preform assembly of *Vallier* is formed by simply stacking various elements 10, 12, 14 on top of each other and then placing the assembly onto the lower mold half 25. The preform assembly remains in place on the lower mold half 25 because of gravity and the alignment of the ports 22'. The final Office Action provides no explanation as to why the preform assembly of *Vallier* would need to be held against the lower mold half 25 or against the upper mold half 20 using vacuum forces. As a result, there is absolutely no apparent reason to use vacuum forces to hold a liner against the lower mold half or the upper mold half in *Vallier*.

In addition, the final Office Action notes that the vacuum forces of *Seng* may be reversed to eject a molded product from a cavity. Paper No. 2005 1110, page 4. However, independent claims 1 and 12 each recite vacuum holding a pre-formed film "against" a mold cavity surface of a transfer mold, such that the use of "vacuum" forces (or more accurately, the reverse of vacuum forces) to eject a molded product from a cavity is irrelevant and insufficient to render the claims obvious.

The rejection of claims 1 and 12 relies solely on the assertion that it would be obvious to modify *Vallier* to include the "vacuum holding means" of *Hotta* or *Seng*. However, there is absolutely no need to vacuum hold either of the liners 12, 14 of *Vallier* to either of the mold halves 20, 25 of *Vallier*. The proposed benefits of using the "vacuum holding means" of *Hotta* or *Seng* would not be provided in the system of *Vallier* – the vacuum holding is not needed to form the liners 12, 14 or to hold the liners 12, 14 against the mold halves 20, 25 of *Vallier*. If anything, the proposed modification would simply increase the cost and complexity of *Vallier* without providing any benefit.

At most, the final Office Action shows that it might be conceivable to modify *Vallier*, without showing that a person skilled in the art would actually be motivated to modify *Vallier* as proposed. The final Office Action has not shown that a person skilled in the art would be motivated to modify *Vallier* with either of *Hotta* or *Seng* to achieve the claimed invention.

For these reasons, the final Office Action fails to establish a *prima facie* case of obviousness of claims 1 and 12, or their dependent claims. Accordingly, the Appellants respectfully request that the § 103 rejection of claims 1, 4-5, 12, 15-16 and 36-37 be withdrawn and that those claims be passed to allowance.

B. Claims 7, 9-11, 30-32 and 34-35

Claims 7, 30 and 34 each recite providing a tape made of a film of compliant material, and pre-forming a plurality of portions of the tape to at least approximately conform a shape of each of those plurality of portions to a mold cavity surface of the transfer mold. None of the cited references discloses, teaches, or suggests pre-forming multiple portions of a tape to at least approximately conform a shape of each portion to a mold cavity surface of a transfer mold. The final Office Action makes absolutely no attempt to explain how claim 7 is rendered obvious by the cited references. In fact, the final Office Action fails to even mention claim 7 in any way, except to assert that the “limitations of claim 7 are fully addressed in the prior art combination set forth above.” Paper No. 2005 1110, page 6. However, the final Office Action never points out where the limitations of claim 7 are “fully addressed” in the “prior art combination set forth above.”

Moreover, *Vallier* clearly discloses how the liners 12, 14 may be formed. In particular,

Vallier recites heating a liner, placing the liner on a forming mold to shape the liner, and allowing the liner to cool while on the forming mold. *Vallier*, column 4, lines 23-37. The final Office Action fails to explain how *Vallier* could be modified to pre-form multiple portions of the same piece of material. In theory, one way could be to use multiple forming molds to form multiple portions of the same liner. However, this option is undesirable since this modification would require multiple forming molds for the upper liner 12 and multiple forming molds for the lower liner 14, and molds are expensive. Another way could be to heat a liner, place a first portion of the liner over a forming mold, cool the liner, and then repeat the process to form a second portion of the liner. However, heating the liner to form the second portion would also heat the first portion of the liner, thereby changing the shape of the first portion.

In effect, the final Office Action has simply assumed that *Vallier* could be successfully modified to pre-form multiple liners on a single piece of material. The final Office Action never shows or explains how *Vallier* could be modified to actually perform these steps.

For these reasons, the final Office Action fails to establish a *prima facie* case of obviousness of claim 7, 30 and 34 and their dependent claims. Accordingly, the Appellants respectfully request that the § 103 rejection of claims 7, 9-11, 30-32 and 34-35 be withdrawn and that those claims be passed to allowance.

C. Claims 2, 8, and 13

Claims 2, 8 and 13 each recite that pre-forming the film of compliant material is carried out immediately before the film is placed within a transfer mold. The final Office Action cites *Vallier* as

disclosing that claim limitation. Paper No. 2005 1110, page 3. However, the cited portion of *Vallier* simply recites that the preform assembly is loaded into a molding apparatus. *Vallier*, column 5, lines 13-15. The cited portion of *Vallier* lacks any mention of when the preform assembly is formed before being loaded into the molding apparatus.

In fact, the cited portion of *Vallier* actually occurs right after *Vallier* explicitly describes storing the preform assemblies for later use (in other words, after assembly and before use). *Vallier*, column 5, lines 9-12. If anything, this explicitly teaches away from the claimed invention of pre-forming a film of compliant material “immediately before” the film is placed within a transfer mold

For these reasons, the final Office Action fails to establish a *prima facie* case of obviousness of claims 2, 8 and 13. Accordingly, the Appellants respectfully request that the § 103 rejection of Claims 2, 8, and 13 be withdrawn and that those claims be passed to allowance.

D. Claims 33 and 36

Claims 33 and 36 each recite that the tape made of a film of compliant material comprises a silicone coated latex saturated paper liner. Such a feature is not found in the cited references.

Vallier discloses liners 12, 14 that are made from a thermoplastic material such as Teflon, ABS or FEP. *Vallier*, column 3, line 67 through column 4, line 14. *Seng* simply states that a film may be formed from a polymer (such as glass cloth) and that a heat resistant releasing agent (such as silicone or a silicone resin) may be used. *Seng*, column 6, lines 13-20. *Hotta* teaches that films such as polyester or polyimide films could be used, and a silicone resin could be placed on the film. *Hotta*, column 3, lines 26-35. None of the references discloses, teaches, or suggests using a silicone

coated latex saturated paper liner.

For these reasons, the final Office Action fails to establish a *prima facie* case of obviousness of claims 33 and 36. Accordingly, the Appellants respectfully request that the § 103 rejection of claims 33 and 36 be withdrawn and that those claims be passed to allowance.

SUMMARY


The Appellants have demonstrated that the present invention as claimed is clearly distinguishable over the prior art cited of record. Therefore, the Appellants respectfully request that the Board of Patent Appeals and Interferences reverse the final rejection of the final Office Action and instruct the Examiner to issue a notice of allowance of all claims.

The Director is hereby authorized to charge any additional fees (including any extension of time fees) or credit any overpayments to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS, P.C.

Date: 9-17-2007


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MAIL STOP APPEAL BRIEF - PATENTS

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APPENDIX A

PENDING CLAIMS APPENDIX

1. (Previously Presented) For use in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a film of compliant material;

pre-forming said film of compliant material to at least approximately conform a shape of said film to a mold cavity surface of said transfer mold;

placing said pre-formed film of compliant material within said transfer mold adjacent to said mold cavity surface of said transfer mold; and

vacuum holding said pre-formed film of compliant material against said mold cavity surface of said transfer mold.

2. (Previously Presented) The method as set forth in Claim 1 wherein said step of pre-forming said film of compliant material is carried out immediately before said film is placed within said transfer mold.

3. (Cancelled).

4. (Previously Presented) The method as set forth in Claim 1 wherein said step of pre-forming said film of compliant material to at least approximately conform a shape of said film to a mold cavity surface of said transfer mold comprises one of: embossing said film and stamping said film.

5. (Original) The method as set forth in Claim 1 further comprising the steps of:
placing said transfer mold over an integrated circuit die on an integrated circuit substrate;
filling said mold cavity of said transfer mold with liquefied molding compound;
allowing said molding compound to solidify; and
removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

6. (Cancelled).

7. (Previously Presented) For use in a transfer molding process of a type that uses a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a tape made of a film of compliant material;

pre-forming a plurality of portions of said tape to at least approximately conform a shape of each of said plurality of portions of said tape to a mold cavity surface of said transfer mold; and

placing one of said plurality of portions of said tape within said transfer mold adjacent to said mold cavity surface of said transfer mold.

8. (Previously Presented) The method as set forth in Claim 7 wherein said step of pre-forming said portion of said tape is carried out immediately before said portion of said tape is placed within said transfer mold.

9. (Previously Presented) The method as set forth in Claim 7 wherein said portion of said tape is pre-formed to a shape that approximately conforms to a shape of said mold cavity surface of said transfer mold.

10. (Previously Presented) The method as set forth in Claim 7 wherein said step of pre-forming said portion of said tape to at least approximately conform a shape of said portion of said tape to a mold cavity surface of said transfer mold comprises one of: embossing said portion of said tape and stamping said portion of said tape.

11. (Previously Presented) The method as set forth in Claim 7 further comprising the steps of:

placing said transfer mold over an integrated circuit die on an integrated circuit substrate;

filling said mold cavity of said transfer mold with liquefied molding compound;

allowing said molding compound to solidify; and

removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

12. (Previously Presented) For use in a transfer molding process of a type that uses a top half of a transfer mold and a bottom half of a transfer mold to encapsulate portions of an integrated circuit within a molding compound, a method for using a pre-formed film in said transfer molding process, said method comprising the steps of:

providing a first film of compliant material;

pre-forming said first film of compliant material to at least approximately conform a shape of said first film to a mold cavity surface of said top half of said transfer mold;

placing said pre-formed first film of compliant material within said top half of said transfer mold adjacent to said mold cavity surface of said top half of said transfer mold;

providing a second film of compliant material;

pre-forming said second film of compliant material to at least approximately conform a shape of said second film to a mold cavity surface of said bottom half of said transfer mold;

placing said pre-formed second film of compliant material within said bottom half of said transfer mold adjacent to said mold cavity surface of said bottom half of said transfer mold; and

vacuum holding at least one of said pre-formed films of compliant material against at least one of said mold cavity surfaces of said transfer mold.

13. (Previously Presented) The method as set forth in Claim 12 wherein said step of pre-forming said first film of compliant material is carried out immediately before said first film is placed within said top half of said transfer mold; and

wherein said step of pre-forming said second film of compliant material is carried out before said second film is placed within said bottom half of said transfer mold.

14. (Cancelled).

15. (Previously Presented) The method as set forth in Claim 12 wherein said step of pre-forming said first film of compliant material to at least approximately conform a shape of said first film to a mold cavity surface of said top half of said transfer mold comprises one of: embossing said first film and stamping said first film; and

wherein said step of pre-forming said second film of compliant material to at least approximately conform a shape of said second film to a mold cavity surface of said bottom half of said transfer mold comprises one of: embossing said second film and stamping said second film.

16. (Original) The method as set forth in Claim 12 further comprising the steps of:

placing said top half of said transfer mold and said bottom half of said transfer mold around an integrated circuit die on an integrated circuit substrate to form a mold cavity around said integrated circuit die on said integrated circuit substrate;

filling said mold cavity of said transfer mold with liquefied molding compound;

allowing said molding compound to solidify; and

removing said transfer mold from said integrated circuit die and said integrated circuit substrate after said molding compound has solidified.

Claims 17-29 (Cancelled).

30. (Previously Presented) The method of Claim 1, wherein:

pre-forming the film comprises pre-forming a plurality of portions of the film to at least approximately conform a shape of each of the plurality of portions of the film to the mold cavity surface of the transfer mold; and

placing the pre-formed film within the transfer mold comprises placing one of the plurality of portions of the film within the transfer mold.

31. (Previously Presented) The method of Claim 30, further comprising cutting the pre-formed film to separate at least some of the plurality of portions of the film.

32. (Previously Presented) The method of Claim 7, further comprising cutting the pre-formed tape to separate at least some of the plurality of portions of the tape.

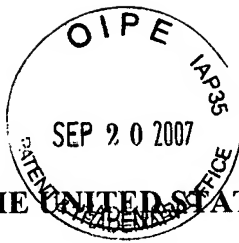
33. (Previously Presented) The method of Claim 7, wherein the film comprises a silicone coated latex saturated paper liner.

34. (Previously Presented) The method of Claim 12, wherein:
pre-forming the first film comprises pre-forming a plurality of portions of the first film to at least approximately conform a shape of each of the plurality of portions of the first film to the mold cavity surface of the top half of the transfer mold;
placing the pre-formed first film within the top half of the transfer mold comprises placing one of the plurality of portions of the first film within the top half of the transfer mold;
pre-forming the second film comprises pre-forming a plurality of portions of the second film to at least approximately conform a shape of each of the plurality of portions of the second film to the mold cavity surface of the bottom half of the transfer mold; and
placing the pre-formed second film within the bottom half of the transfer mold comprises placing one of the plurality of portions of the second film within the bottom half of the transfer mold.

35. (Previously Presented) The method of Claim 34, further comprising:
cutting the pre-formed first film to separate at least some of the plurality of portions of
the first film; and
cutting the pre-formed second film to separate at least some of the plurality of portions of
the second film.

36. (Previously Presented) The method of Claim 12, wherein:
each of the first and second films comprises a silicone coated latex saturated paper liner;
and
pre-forming the first and second films comprises pre-forming the silicone coated latex
saturated paper liners while edges of the films are unconstrained.

37. (Previously Presented) The method of Claim 5, wherein:
the vacuum holding causes the pre-formed film of compliant material to adhere to at least
part of the mold cavity surface; and
the filling of the mold cavity with the liquefied molding compound causes the pre-formed
film of compliant material to conform to the shape of the mold cavity surface.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No.: 10/066,245
Filed: January 31, 2002
For: METHOD FOR USING A PRE-FORMED FILM
IN A TRANSFER MOLDING PROCESS FOR AN
INTEGRATED CIRCUIT (AS AMENDED)
Group No.: 1732
Examiner: Edmund H. Lee

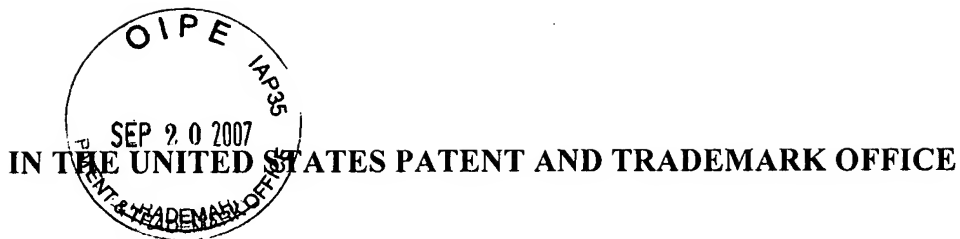
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Alexandria, VA 22313-1450

APPENDIX B

EVIDENCE APPENDIX

None



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APPENDIX C

RELATED PROCEEDINGS APPENDIX

None